

10/561075  
USPTO Rec'd PCT/PTO 19 DEC 2005

SEQUENCE LISTING

<110> Wang, Tianlin  
Lohuis, Michael M.  
Kojima, Cheryl J.  
Du, Fengxing  
Byatt, John C.

<120> MARKER ASSISTED BEST LINEAR UNBIASED PREDICTION (MA-BLUP) :  
SOFTWARE ADAPTIONS FOR PRACTICAL APPLICATIONS FOR LARGE BREEDING  
POPULATIONS IN FARM ANIMAL SPECIES

<130> 11916.0065.00PC00

<150> US 60/543,034  
<151> 2004-02-09

<160> 3

<170> PatentIn version 3.3

<210> 1  
<211> 5888  
<212> DNA  
<213> Sus scrofa

<220>  
<221> misc\_feature  
<222> (1)..(5888)  
<223> Sequence for AMPK gamma subunit

<400> 1  
atgagcttcc tagagcaagg agagagccgt tcatggccat cccgagctgt aaccaccagc 60  
tcagaaaagaa gccatgggaa ccagggaaac aaggcctcta gatggacaag gcaggaggat 120  
gtagaggaag gggggcctcc gggcccggagg gaaggtgagt tcaaggccag ttctgggag 180  
ctgggactgg gggcagtggg cagtcctcaa acctggggcc cgtctctggc ctggccctc 240  
cataacacag gcacataaca tcatgcagcc agtctccccaa caagggggag gacaactgca 300  
ttgctgatcc aggggtccag ggatccaagg tggccaaactc aggacagagc cactgtcttc 360  
tctgtgactc tctgagactc agctctctca cctgcaaaat ggggccacag cattcaggct 420  
tcccaagggtt gcaatgagga tgaatggaga cagcagatga ggaagttctc tggaaagaggg 480  
atttactgtg ctctccctcc cgctccccga acaggtcccc agtccaggcc attgctgag 540  
tccaccgggc aggaggccac attccccaaag gccacaccct tggcccaagc cgctcccttg 600  
gccgaggtgg acaacccccc aacagagcg gacatcctcc cctctgactg tgcagcctca 660  
gcctccgact ccaacacaga ccatctggat ctggcatag agttctcagc ctcggcggcg 720  
tcggggatg agcttggct ggtgaaagag aagccagccc cgtgcccattc cccagaggtg 780  
ctgttaccca ggctgggctg ggatgatgag ctgcagaagc cggggccca ggtctacatg 840

cacttcatgc aggagcacac ctgctacgt gccatggcga ccagctcaa actggtcac	900
ttcgacacca tgctggaggt gagggcacgc ctcagcccc cccatcctca cccccccccca	960
ggatgccttg ccagctctgc cccccctcaa gccccttccc gaactccttc cgccatgaat	1020
ggagaccggg ggagggcttc tgctctctgc acgcacccct taattgtcat cccagctctg	1080
caactcagta tccagagata ggaatgcctg cttagcctg cgaatttcag aggattcctg	1140
ggacaagcca ggcaatatat gaaagtcttt gcagggtggc ttaggacaaa gagcaaggga	1200
ctcttggtaa gagaaaaata gnatgagctc tgctccccac tcttcctta gttaaacta	1260
tgaaacattt ggttccgtgc ttctcgctgt gtgcactatt tgattctagt gaaatatgaa	1320
caaatacatt tcatgttagta gcttgtatg ttataatatt agatattta caatattaga	1380
aaattacagt cagcaggtgt agatagtctt gtttagggtg aggcccaa at aagtcaatgt	1440
aaaatttatt tagggaaaaa tattttgtaa atattataca cataatttca cctctagcac	1500
ttaacaaaat cgatactatg tgtgtctgta cacttatgac tttggagtag aaacactggg	1560
ttggtttccc acaccttgg a gtgcttgggg aggggtcacc tcagtagctc tggccaccag	1620
cagccttaga tctggaacaa atgtcagac aaggatctcg tggagggcat gccaggacgt	1680
gggagaggca gacagcaggc tcatgttagag gcaggcccg gaggccccc gtggaagaac	1740
cctggctggc aggggacctc tgaggcgcag ggaacgattc accctcaact gttctctccg	1800
gchgctcagat caagaaggcc ttcttgccc tggtgccaa cggcgtccga gggcacctt	1860
tgtggacag caagaagcag agttcgtgg gtgaggaggg gctggggagg cagaggtgg	1920
ggggaaaggga atagggggac cttgtgggt gattctaggg ccgagctctg acacaccaca	1980
ggcttcaacc aagcagggc ctggccttgg gaggggggga gcatttgacc ccggctcct	2040
ggtgccagc tggagatct caactgttagg agagctgtga ccagctgacc cctccagctc	2100
tactaccca aggtccctgt cgccaggtgt aagtaagaag aggacaggcg gaggaaggaa	2160
gtcagaaaat agaagaagca gggcaggaag gagagaaatg acaggggaag cataagaggg	2220
acaacccat ttgtcaggca cgggagggc tgccctcctg tcctctttg gccaccctca	2280
gtaaaaggat gtggcaggg tggggggagg ggcccgggt gaccccccatt gctccctcg	2340
ccccacaggg atgctgacca tcacagactt catcttggtg ctgcaccgct attacaggtc	2400
ccccctggtg aggagtggc tgggggtcct ggaacaccca tctggctgg ggtggaagga	2460
gttcagggga ccctcgctg actttggag ttccgttgcgt gtcttaggt ccagatctac	2520
gagattgaag aacataagat tgagacctgg aggggtgagc aggccagggg acgggcgaag	2580
gggctgaggg tttgtgggtg aggtggggc caaggacctc agggagagca tgcgactgg	2640
aggttcctg gaggaagcgg gaggagggtg atcgggagcc cagggatct aaggagggaa	2700

gacagtctgg gggtggccac gtgaggcggg gtggtcggcc cctttgtgct gattctggct	2760
tttcctgcag agatctacct tcaaggctgc ttcaaggcctc tggtctccat ctctccaaat	2820
gacaggtgag cttccccagc cgcccactcg agcctccttg ccccgcacag accccttctc	2880
cagctcatcg gttctaagct catggactca tcgtccgtgg actgcagatg cgccagcttt	2940
gacaccctgt cctcctctcc aggggggctg gatatgaaggg gctcttttc cagactgcc	3000
caggctcaact gctcccacct ccacagcctg ttcaagctg tctacgcctt catcaagaac	3060
cgatatccacc gcctgcccgt cctggaccct gtctccgggg ctgtgttcca catcctcaca	3120
cataagcggc ttctcaagtt cctgcacatc tttgtgagcc tgggcacagc ctcagggaca	3180
acctgagtgg ctgagaagtc tttagcccta gggatggggg agggagtagc tgggagcccc	3240
ctgaggggcta ctccctcctg gcctcacctg tcccaaccca accaggcac cctgctgccc	3300
cggccctcct tcctctaccg caccatccaa gatttggca tcggcacatt ccgagacttg	3360
gccgtggtgc tgaaaacggc gcccatcctg accgcactgg acatttcgt ggaccggcgt	3420
gtgtctgcgc tgccctgttgt caacgaaact ggtacctatg cccaggatgg gggctctggc	3480
tgtgatggga ctgcgggggg gcaggggtct aggtggcatc aacttgggt ccagcatgga	3540
gtcaggggcta gcagtctctg cttctttga gcttggacc agttgcttag cctctctgag	3600
ccagaccta agttttccct ctgaaaaaga cttaaaggaa ccatggctgc acactgttc	3660
aaggtaaat tcaccataaa gaagccagat atcgagaagt atttaattt atgtttgatt	3720
atgaaacatt tccaatgtct gaacatggca gaaaaaacta taatgaaccc cacgtatcca	3780
cctggattaa ccactgttaa catgatgccg tgaccagttc tttttttt ttctggcca	3840
aagtaattt aaggaaatta tattatagaa ttatgtcatt tcacccggg acacttcatc	3900
tgctctctttt aaaataaggg tacttcctat atcaccttac aattatgaat aatttattaa	3960
tgctatctaa tatccaatcc taattctcat ttctccattt tcccaagaa tatcttttt	4020
tttttaaca gttgatttgt tgagaccaag atccaatcaa ggtccatgtt tcgcatttgc	4080
ttcttttttc ccttaagcct cttaatct agaacagttc ctccttgct ttatcttgc	4140
gacaccggtg atgagaagct gggtcagttg tcctgttagaa tgtcacactt tgagagattt	4200
gcctgttagc tttccacagg tagcccttat ttttttctc tattcctgct ttccctgtga	4260
ccggaaatt agctctaaag gctggatcag attcaggcta gacattgaa cctagaatat	4320
ttcagaggtg atgccatgta ctcctgtctc atcatattag gaggcatgac ggcaggtgt	4380
tctctctgtg tcatgttatt tgcattgtgg gctcaggtgc tggccgtctg atgcctcact	4440
ataaagccgg tagcgtgagg ggtggggagt tcattccaa accccacccc aggccctcgc	4500

tcannatcct ggntctgacc caaacctctc ccctgtctt ctcacaccc tt cccctgcc	4560
cctcccatcc cccacaggac aggtagtggg cctctactct cgcttgatg tgatcgtaag	4620
tatctatggg gaacggaggg gacctggggg accacaggga ggctgtggg tgaagatgga	4680
tggaggttgg tatctgtgga ccagggaggc cttaacatg tataataga gattattttgt	4740
gggactggag cctggccgag ggctaagaat ggtccccct ccctgcccag cacctggctg	4800
cccaacaaac atacaaccac ctggacatga atgtggaga agccctgagg cagcggacac	4860
tgtgtctgga aggctgcctt tcctgcccagc cccacgagac ctgggggaa gtcattgacc	4920
ggattgtccg ggaacaggtt cccagcccc ttcatgcctg ctcccaacat gttagggcccc	4980
gtcctccctcg tgagcagctc cagctagccc atccaccggg cacctgtccg gccccccat	5040
ccccattct catggccaag ctcatggtgt ccatattggc cagtactgg tcctattatc	5100
ggggccctca gggcaagggc cacagccagc tgatcaccca gggtggtcac agccacccgt	5160
aagcagttt taggagaccc tctgaggcac cccagtttag gttaagttgt tgccctgat	5220
tctcagtgcc aacctcattt gccgcctatag ccgcattggca ctgccccctc actgagcctc	5280
tgtggccca caggtgcacc gcctgggtct cgtggatgag acccagcacc ttctggcgt	5340
ggtgtccctc tctgacatcc ttcaggctct ggtgctcagc cctgctggaa ttgatgcct	5400
cggggcctga gaaccttggg acctttgctc tcaggccacc tggcacaccc ggaagccagt	5460
gaaggggagcc gtggactcag ctctcacttc ccctcagccc cacttgcgg tctggctt	5520
gttcaggttag gctccgcccc gggccctgg cctcagcatc agccctcag tcccttgg	5580
cacccagatc tcagactggg gcaccctgaa gatgggatg gcccagctt tagctgagca	5640
gccttgcggaa atctaccatc atcaagactc actgtggac cactgcattt tccattctc	5700
agctgaaatg atggagggcc tcataagagg ggtggacagg gcctggagta gaggccagat	5760
cagtgacgtg cttcaggac ctccggggag ttagagctgc cctctctcag ttca	5820
ccctgctgag aatgtccctg gaaggaagcc agttaataaa cttgggttgg atgaaatttc	5880
cacactcg	5888

<210> 2  
 <211> 421  
 <212> DNA  
 <213> Sus scrofa

<220>  
 <221> misc\_feature  
 <222> (1)..(421)  
 <223> Partial sequence for Porcine Leptin Receptor gene

<400> 2

gcactgtttg agcacttgga aagttaaata attattgttg gagactgcat gttttaatct 60  
tagatacttc ctatttatgt cttagtc当地 atgattaatt gctttctat gtgtcttta 120  
aatgtcctaa cagaatttat ttatgtgata actgcatttgc acttggcata tccaattact 180  
ccttgaaat ttaagttgtc ttgc当地gcca ccaaatacaa catatgactt cctcttgcc 240  
gctggaatct caaagaacac ttcaactttg aatggacatg atgaggcagt tggtgaaayg 300  
gaacttaatw yaagtggta ctaacttatca aacttatctt ctaaaacaac tttccactgt 360  
tgctttgga gtgaggaaga taaaaactgc tctgtacatg cagacaacat tgcaggaaag 420  
g 421

<210> 3  
<211> 96  
<212> PRT  
<213> Sus scrofa

<220>  
<221> MISC\_FEATURE  
<222> (56)..(56)  
<223> Xaa = Met or Thr

<220>  
<221> MISC\_FEATURE  
<222> (60)..(60)  
<223> Xaa = Ser or Ile

<400> 3

Glu Phe Ile Tyr Val Ile Thr Ala Phe Asp Leu Ala Tyr Pro Ile Thr  
1 5 10 15

Pro Trp Lys Phe Lys Leu Ser Cys Met Pro Pro Asn Thr Thr Tyr Asp  
20 25 30

Phe Leu Leu Pro Ala Gly Ile Ser Lys Asn Thr Ser Thr Leu Asn Gly  
35 40 45

His Asp Glu Ala Val Val Glu Xaa Glu Leu Asn Xaa Ser Gly Thr Tyr  
50 55 60

Leu Ser Asn Leu Ser Ser Lys Thr Thr Phe His Cys Cys Phe Trp Ser  
65 70 75 80

Glu Glu Asp Lys Asn Cys Ser Val His Ala Asp Asn Ile Ala Gly Lys  
85 90 95